

-continued

Leu Glu Val Leu Phe Gln Gly Pro
1 5

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<212> TYPE: DNA
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What is claimed is:

1. A variable domain of a heavy chain-only antibody (VHH antibody) comprising:

an amino acid sequence that consists of 4 framework regions (FR1 to FR4, respectively) and 3 complementary determining regions (CDR1 to CDR3, respectively) according to the formula: FR1-CDR1-FR2-CDR2-FR3-CDR3-FR4;

wherein CDR1 is the amino acid sequence of SEQ ID NO:31 or an amino acid sequence having at least 85% identity with SEQ ID NO:31;

wherein CDR2 is the amino acid sequence of SEQ ID NO:53 or an amino acid sequence having at least 85% identity with SEQ ID NO:53; and

wherein CDR3 is the amino acid sequence of SEQ ID NO:75 or an amino acid sequence having at least 85% identity with SEQ ID NO:75.

2. The VHH antibody of claim 1, wherein the VHH antibody comprises an amino acid sequence that has at least 80% identity with the amino acid sequence of SEQ ID NO: 1.

3. The VHH antibody of claim 1, wherein the VHH antibody comprises an amino acid sequence that has at least 85% identity with the amino acid sequence of SEQ ID NO: 1.

4. The VHH antibody of claim 1, wherein the VHH antibody comprises an amino acid sequence that has at least 90% identity with the amino acid sequence of SEQ ID NO: 1.

5. The VHH antibody of claim 1, wherein the VHH antibody comprises an amino acid sequence that has at least 95% identity with the amino acid sequence of SEQ ID NO: 1.

6. The VHH antibody of claim 1, wherein the VHH antibody comprises an amino acid sequence that has at least 99% identity with the amino acid sequence of SEQ ID NO: 1.

7. The VHH antibody of claim 1, wherein CDR1 is the amino acid sequence of SEQ ID NO:31 and CDR2 is the amino acid sequence of SEQ ID NO:53.

8. The VHH antibody of claim 1, wherein CDR1 is the amino acid sequence of SEQ ID NO:31 and CDR3 is the amino acid sequence of SEQ ID NO:75.

9. The VHH antibody of claim 1, wherein CDR2 is the amino acid sequence of SEQ ID NO:53 and CDR3 is the amino acid sequence of SEQ ID NO:75.

10. The VHH antibody of claim 1, wherein the framework regions are the framework regions of SEQ ID NO: 1.

11. The VHH antibody of claim 10, wherein the VHH antibody has binding activity for a muscarinic receptor M2.

12. The VHH antibody of claim 6, wherein the framework regions are the framework regions of SEQ ID NO: 1.

13. The VHH antibody of claim 12, wherein the VHH antibody has binding activity for a muscarinic receptor M2

14. The VHH antibody of claim 7, wherein the framework regions are the framework regions of SEQ ID NO: 1.

15. The VHH antibody of claim 14, wherein the VHH antibody has binding activity for a muscarinic receptor M2

16. The VHH antibody of claim 5, wherein the framework regions are the framework regions of SEQ ID NO: 1.

17. The VHH antibody of claim 16, wherein the VHH antibody has binding activity for a muscarinic receptor M2

18. The VHH antibody of claim 4, wherein the framework regions are the framework regions of SEQ ID NO: 1.

19. A method of compound screening and/or drug discovery, the method comprising: